

REMARKS

In the Office Action dated October 12, 2004, the drawings and specification were objected to; and claims 1-13 were rejected under 35 U.S.C. § 102 over each of U.S. Patent No. 3,311,178 (McElheny), U.S. Patent No. 5,088,557 (Ricles), U.S. Patent No. 4,515,217 (Stout), and U.S. Patent No. 4,605,074 (Barfield).

OBJECTIONS TO DRAWINGS AND SPECIFICATION

The drawings and specification has been amended to address the objections as well as to correct other minor clerical errors. No new matter has been added.

REJECTIONS UNDER 35 U.S.C. § 102

As amended, claim 1 is not disclosed by any of the cited references. In particular, amended claim 1 recites a first chamber and a second chamber, with a port selectively openable to enable communication between the first chamber and the wellbore region to provide a local low pressure condition in the wellbore region, and a tool to perform an operation in the local low pressure condition after the at least one port is opened to create the local low pressure condition. Moreover, claim 1 recites that a flow control device opens communication between the first chamber and a second chamber inside the tool string to create a flow surge into the second chamber after the tool has performed the operation.

This combination of elements is not disclosed by any of the cited references. McElheny does not disclose the presence of both first and second chambers that have the specified relationship with respect to the tool that performs an operation recited in claim 1. In McElheny, there is only one low-pressure chamber, the chamber between the frangible disk 55 and the top of connector 17, as depicted in each of Figs. 2, 4, and 5.

Although Ricles discloses multiple pressure attenuating apparatus 10, 10A, 10B, Ricles does not disclose a flow control device to open communication between the first chamber and the second chamber *inside the tool string* to create a flow surge into the second chamber after the tool has performed the operation.

Stout describes the opening of radial ports 15 by movement of a piston 20, *after firing of the perforating gun*, to enable flow of fluid from formations into the interior of a tubing string.

First and second chambers having the specified relationship with respect to the tool of claim 1 is not disclosed by Stout.

Barfield discloses use of a frangible disk 20a that is disintegrated by increased pressure caused by operation of a perforating gun such that at the time the gun is fired, a negative pressure condition is introduced below the packer by a surge chamber. However, Barfield does not disclose the first and second chambers having the specified relationship with respect to the tool of claim 1.

In view of the foregoing, it is respectfully submitted that claim 1 is not anticipated by any of the cited references.

Amended independent claim 8 is allowable over the cited references for similar reasons.

All dependent claims, including newly added dependent claims 14-20, are allowable for at least the same reasons as corresponding independent claims.

Allowance of all claims is respectfully requested. The Commissioner is authorized to charge any additional fees and/or credit any overpayment to Deposit Account No. 20-1504 (SHL.0141D1US).

Respectfully submitted,

Date: Jan 11, 2005

  
Dan C. Hu  
Registration No. 40,025  
TROP, PRUNER & HU, P.C.  
8554 Katy Freeway, Suite 100  
Houston, TX 77024  
Telephone: (713) 468-8880  
Facsimile: (713) 468-8883

AMENDMENTS TO THE DRAWINGS

Replacement sheets containing Figures 5A, 5B, 9, 10, and 11 are submitted herewith. Figure 5A has been amended to add reference numeral 56F. Figure 5B has been amended to replace reference numeral 312 on the left side of the figure with reference numeral 310. Figure 9 has been amended to delete reference numeral 512A. Figure 10 has been amended to delete reference numeral 631. Figure 11 has been amended to add the reference numerals 700, 704, 706, and 712.